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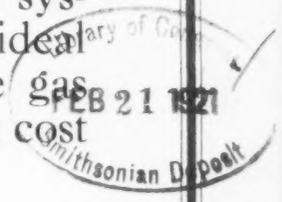

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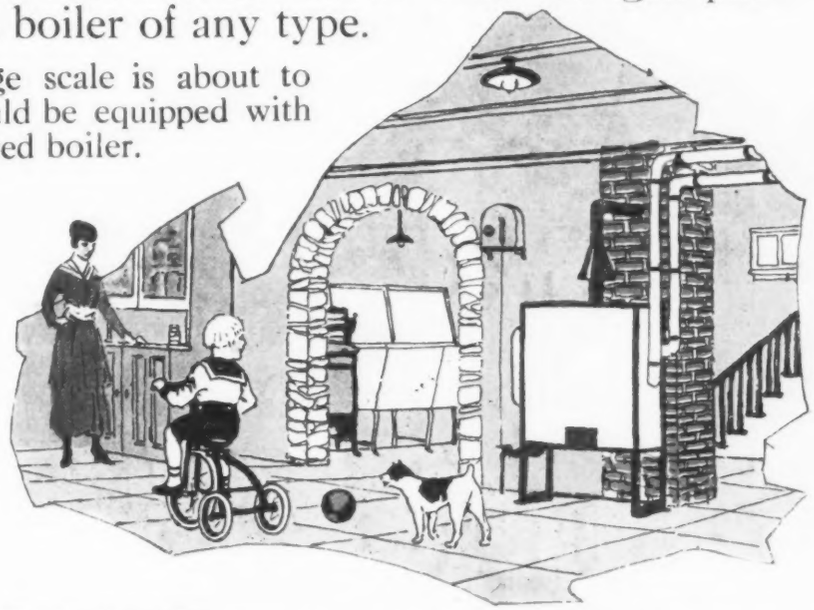

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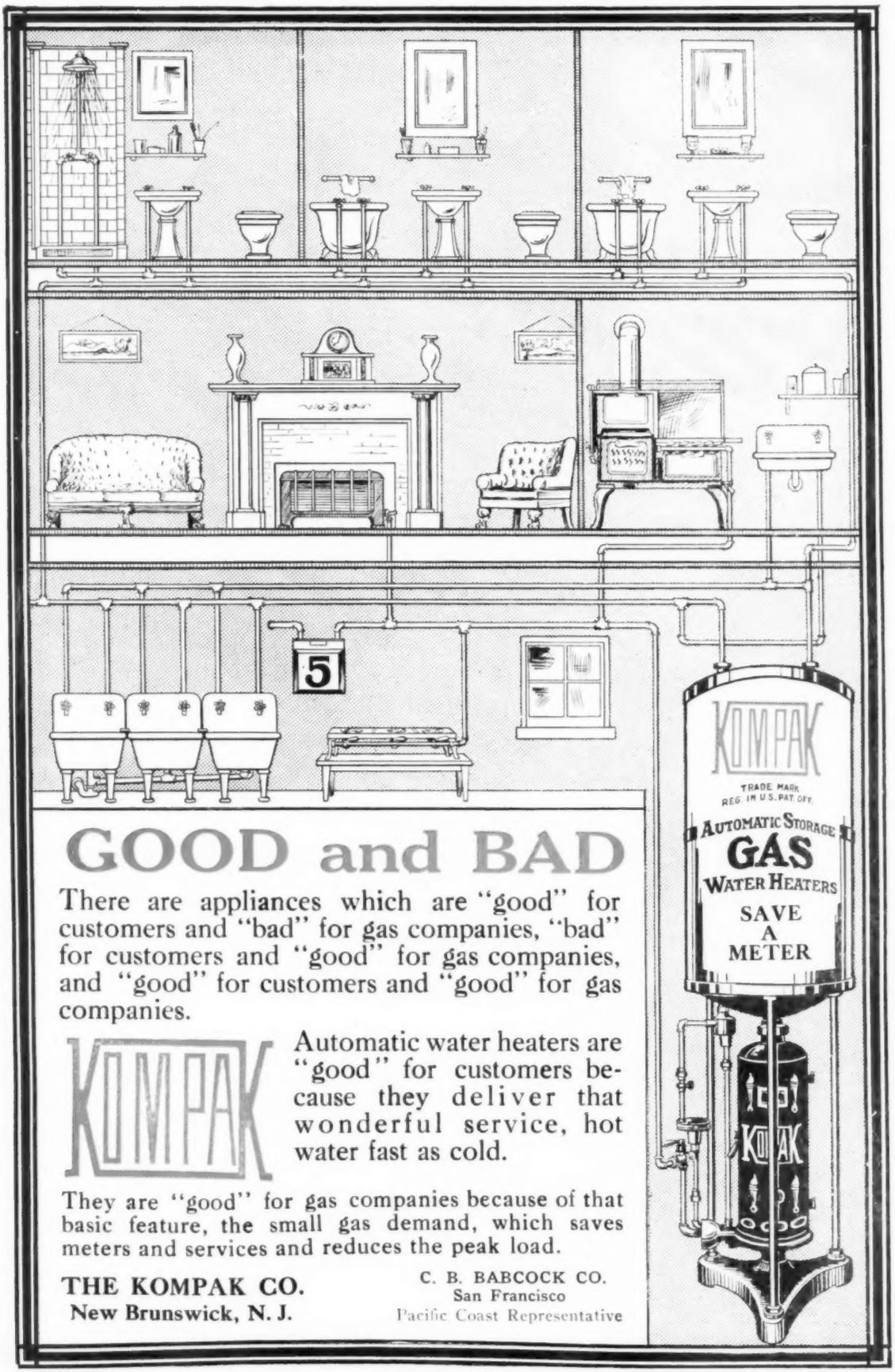
INDEX TO CONTENTS, PAGE 165

ADVERTISERS' INDEX, PAGE 22



GOOD and BAD

There are appliances which are "good" for customers and "bad" for gas companies, "bad" for customers and "good" for gas companies, and "good" for customers and "good" for gas companies.

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Automatic water heaters are "good" for customers because they deliver that wonderful service, hot water fast as cold.

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Gas Lighting*

Subject Appears Again on New England Association Program

By A. J. SMITH
Manager, Concord Light & Power Company, Concord, N. H.

When I received a letter from our president asking if I would write a paper on gas lighting I replied by asking him if he didn't have something easier on his list, as I thought it was a hard proposition to write anything new or interesting about gas lighting, owing to the fact that this subject had been so thoroughly covered at these meetings.

During the past few years I have heard a number of interesting papers and discussions on gas lighting, but I have noticed in the more recent years that when a paper on this subject was announced to be read at any of these meetings, that a large number of the members present would suddenly have a call to more important business outside, which led me to believe that most of our members were losing interest in this subject. When a paper on a new industrial use for gas is announced, the members are eager for the details (which is as it should be), but at the same time it should be remembered that about 20 per cent of the gas sold to-day is for lighting purposes, and although that percentage may possibly decrease to 19, 18 or even 10 per cent some time, it will be a long time off if aggressive methods are used to hold our present business, and to push modern gas lighting appliances.

It is a bully good creed that Mr. Smith preaches. It's well worth studying and emulating. Gas-men can well fall in line. It's time they did anyway, but it comes a heap better from Mr. Smith than from us. However, we're with Mr. Smith from start to finish. — Editor

In making a study of any question, our first thought is, how do we stand to-day? What is the status of gas lighting to-day? In arriving at an answer to this question it seemed unnecessary to send out a stereotyped list of questions to various companies, as the report of the 1920 subcommittee of the American Gas Association, of which T. H. Piser is chairman, went into this matter fully.

That committee found that about 22.28 per cent of all gas sold to-day is used for illuminating purposes. Of course, this percentage must vary a great deal in different localities. Combination companies are probably not pushing gas lighting to the extent that straight gas companies are.

There are some cities where the lighting load is as much as 40 per cent, and others not more than 10 per cent. The question of percentage does not really mean as much as seems at first thought, owing to the fact that gas sales in this country have more than doubled in the past ten or twelve years, and naturally the percentage sold for lighting has decreased in like ratio with the increase secured from other appliances. Many companies have as much or more lighting business now as ten years ago, although the percentage of the whole is much smaller. It would appear that many may have been led to discouragement through the diminishing percentage argument.

Gas lighting is the first-born of the gas family, but nobody but a bachelor can constitute 100 per cent of his whole family.

More Lighting To-day

Regardless of the question of percentage, it is doubtless a fact that there are a great many more lighting units in service to-day than ten years ago. This is borne out by the fact that the largest manufacturer of mantles in this country now has an annual capacity of 40,000,000 mantles against a capacity of 7,000,000 ten years ago, and every manufacturer has correspondingly increased his output. In the writer's own city, lamp sales increased 25 per cent and mantle sales 400 per cent in 1920 over 1910. The indications are that during 1920 there is more artificial gas passing through lighting burners than ever before in the world's history, and immeasurably more candlepower being developed from it because of the increased efficiency of the lamps.

*Paper read before New England Association of Gas Engineers.

The main conclusion drawn from the gas lighting committee's report seems to be that the gas companies have not been properly sold, which is no doubt true in many instances.

Under these circumstances the main usefulness of a paper on gas lighting at this time would seem to be in the direction of emphasizing a few of the well-known methods of obtaining new, and retaining our present business in the lighting field.

The Greatest Handicap

The greatest handicap to be overcome in the pushing of gas lighting appliances is aristocratic prestige. By this I mean the great human desire to have something a little later in fashion than the other fellow. Forty years ago it was candles against kerosene, twenty years ago kerosene against gas, and to-day gas against electricity, and still it is known that the sales of candles, kerosene and gas are much larger to-day than ever before, which goes to show that there is plenty of room for us all in this great and progressive world of ours.

Many a time have I passed a house at night and observed the owner with double-barreled spectacles on, endeavoring to read by the light of a sixteen-candlepower electric light, and I have pitied the poor, rich man from the bottom of my heart, but he is bound to be aristocratic regardless of the effects upon his eyesight. I know of an eye specialist who keeps a record of the people in his town who use electric lights for reading, as he considers them his best and most promising customers.

Here might be said a few words relative to the hygienic value of gas. This is well stated by Dr. Samuel Rideal in the London *Gas Journal* of Nov. 11, 1919.

"The burning of gas is accompanied by the production of considerable quantities of carbonic acid, water vapor, and other substances, which at first glance one would expect would prejudicially affect the composition of the air of a room used for dwelling purposes. But the gas lamp acts as a ventilator. Its products ascend, and tend to draw with them the products from the human beings in the room. Therefore, notwithstanding the products from gas, it is an aid to ventilation, and improves the quality of the air in an inhabited room. The smaller the room the more important does it become to ensure ventilation."

The organic matter in the air of a room is destroyed by the burning gas. Another important effect produced by a gas light in a room is the destruction of the sulphur. The sulphur in the gas is completely burned by the mantle, and forms small quantities of sulphuric acid. There is no sulphuretted hydrogen in coal gas, but there are sulphur compounds, and there has been great discussion as to whether or not these should be taken out entirely.

Some Sulphur Beneficial

But the small quantity of sulphur in the gas is beneficial, as it confers a sterilizing property on the air passing through the gas flame. The air which is passed through a gas flame in a room has been sterilized, partly by the heat, and partly by the sulphur gases that are oxidized by the mantle. The cremating effect of the gas burner, and the sulphur essences in the gas contribute to the improvement of the air in the room. This is a distinct advantage, which ought to be pressed home by people interested in the gas industry, especially at the present time.

It is very important that they should realize there is no doubt whatever that there are advantages accruing from heating and lighting by gas as compared to coal fires or electricity. In order to enlighten the public on these questions, well-written articles from sources of authority should be printed in our national magazines and newspapers, aided by good local advertising of all of the facts.

The up-to-date manufacturers of lamps, fixtures and glassware are rapidly coming to the front with endeavors to educate the gas companies in the best methods of selling and keeping maintained the appliances sold by them. This is real co-operation and should be welcomed by the gas companies. One of the latest demonstrations of this helpful work is the sending out of organized crews to help the companies in special campaign work. This kind of work has been especially useful in campaigning semi-indirect fixtures. The placing of 17,000 or more semi-indirects in New York City last fall, in a few weeks' campaign, well shows the enormous field for this kind of work. The immediate benefits of these campaigns is only a small part of the good accomplished, as the regular sales that follow are sure to be felt for months to come.

Maintenance Necessary

A great deal of the good accomplished by campaigns is lost if the lamps are not properly maintained after being installed. This brings up the old question and problem as to whether the company should maintain its lamps or not, and the method and charge for so doing.

The writer believes from experience that all residence lighting installations should be visited twice a year, and that all material should be charged for at the regular prices, with the labor free. Most of our lighting complaints would disappear if all lamps were regularly and properly adjusted and cleaned. If we do nothing to relieve these complaints, and our electric competitors continue to wage their present aggressive campaigns of publicity, setting forth the advantages and convenience of their product, must we not face the continuous prospect of losing residential lighting consumers, only to find out after they are lost that we might have retained their business had we given them service which would prevent unfavorable conditions?

Of course, during the past four years, owing to a shortage of good men and the prices it was necessary to pay good men, it has been practically impossible to do this type of work in many cities, but with normal times again in sight it behooves us to get busy again with our maintenance systems.

During the past two or three years we have secured considerable co-operation from our consumers in adjusting their own lamps by leaving with them a card with simple instructions for the adjustments of lamps, ranges and water heaters printed thereon. This card is of good material, well printed, made as simple as possible, and is kept by most consumers.

Method of Charging

I believe that all costs for maintaining lamps should

(*Continued on page* 170.)

Office Work in a Small Company*

A Splendid Outline of Methods That Can Be Used Successfully

By PAUL B. MURPHY
Treasurer, Potsdam Light & Power Company

This paper by Mr. Murphy is a splendid presentation of facts that all of us have been aware of for a long time but which we have dodged. It is well worth reading carefully and passing along to the other fellow. It has some mighty fine suggestions to present.—Editor

Office work in a small company as a subject might be divided into:

1. Definition of work to be done.
2. Methods of doing it with the least expenditure of time and money.

Work to be done is divisible into:

Purchasing.
Storekeeping.
Correspondence and filing.
Accounting.

The methods of getting the office work done involve:

Organization.
Physical equipment, including housing and office furniture and appliances.
Employee selection.

While I touch briefly on all these I shall discuss them from the standpoint of the man in charge of accounting for a small company, as I cannot qualify as a purchasing agent, storekeeper or stenographer.

The large utility companies have been the pioneers in office methods and accounting systems and have been most generous in their assistance to the small companies. I believe the small companies should be bolder in their experiments, as in a small outfit only a few people are affected by a change in the routine and it seldom entails much expense. No upheaval is necessary. The systems of any company are the result of an improvement here and there.

Necessity is the maternal parent of invention and because the appropriation for office work in our office has been limited, we have pestered the larger companies, pumped salesmen, perused literature, visited other companies, and experimented for several years without tagging any system or form as final or perfect. Systems of larger companies have been adapted to our conditions, and short cuts found, after experience gave us confidence.

Care has to be exercised in adopting wholesale the systems of others. At the beginning of our career as utility operators we had an expensive system installed by accountants, thoroughly capable in other lines than systematizing, who without studying our conditions wished on us a complete set of books and forms that later had to be thrown out bodily.

On the other hand, too little system is dangerous. I called on the office manager of a neighboring company a few years ago and he proudly exhibited his check register. He explained how each bill paid was extended to the proper column and how at the end of each period he drew off a statement consisting of the totals of the columns and presented it to his directors as the expense of doing business. I knew the company was hard pushed for cash and seeing a file full of invoices, said "What are these bills?" Quoth he, "Those are bills we can't pay, but so far as my books are concerned they don't exist." We secured control of that company later and I assure you bills did exist, and we had to raise the rates to pay them.

To keep these remarks from sounding like the well-known Red Book, I must make them narrative in form and the systems described must be largely our own systems. I will label my opinions, however, so they will not be taken for experience.

Organization

To give you some idea of the size of the organization I have in mind, I will outline our general or main office organization.

Our office is headquarters for ten corporations, the officers and executives being practically the same for all.

Aside from the executives and the usual assortment of engineers, we have:

One purchasing agent—an engineer with other duties, including the preparation of important power bills.

Four stenographers, only one of whom is exclusively assigned, though all have certain definite assignments.

One filing clerk.

One telephone operator and information clerk who keeps stationery stock, checks copy with stenographers, does copy work on typewriter, and does clerical work for the accounting department in her spare time.

One office messenger (girl)—we haven't had an office boy since ante-bellum days.

One chief clerk and seven clerks in accounting department. Their duties are:

Two general ledger clerks with one assistant each.
One voucher and pay-roll clerk.
One fixed capital and job record clerk.
One general utility man who acts as cashier and

*Paper read before Empire State Gas & Electric Association.

paymaster, takes inventories, keeps general stock records and is substitute local manager of branch offices.

From five local or branch offices, where all consumers' records are kept, come revenue reports, pay rolls, storeroom reports, deposits, and approved invoices.

From power houses, general transmission line crew, a garage, and other sources, come daily time reports, supply orders, etc., direct to the general office.

Office Furniture and Appliances

It is best to adopt standard desks and appliances and have all typewriters and adding machines standard, and if possible to contract for regular inspection and repairs.

Where the furniture is poor and the building ditto, the office people are prone to have many auxiliary shelves and hooks and the walls are draped with arch files. Much time is wasted fooling with such things. I remember keeping one carpenter fairly busy catering to my whims when I was a budding bookkeeper housed in a dingy building but employed by an indulgent organization.

If we did not standardize space and equipment each clerk would take half an acre. I visited recently an engineer who happens to be the only regular occupant of a large room, who has his papers and books on three flat top desks, one big table, one draftsmen's table, two window sills, one radiator and six arch files hanging on the wall.

We have had much better work in our office since we threw out every roll top and high desk and installed flat topped desks throughout. We do not allow our desks to become covered with papers. My opinion is that two-drawer tables or so-called table desks would be proper for most of the clerks, as the less space they have in which to store things, the better. We do not allow vouchers to be held in the desks and have nothing filed in the bookkeeping room except the current vouchers. Our filing department takes care of all transfer records and a tickler system in the filing department cares for and returns promptly to the bookkeeping room on the requested date any papers that need not be handled at once.

We do not allow the desks of our employees to be locked. Every desk should be open to the executive, as it is a common experience to be called upon for a special report or statement and have to work at night or on Sunday, and it is worse than irritating to find papers locked up in the desk of some employee.

I do not believe in incurring unnecessary expense for costly equipment in small offices. Each of our offices has sufficient typewriters to handle the business, an adding machine and all of the inexpensive appliances necessary, but we do not believe in buying expensive bookkeeping machinery, mail opening or closing equipment or things of that sort which depend on volume for their success.

Employee Selection or Personnel

The bookkeeper of fiction is a crabbed, faithful old dog with a green eye shade and black sleeve protectors, perched on a high stool adding them up in a ponderous ledger. I know that he existed at one time, for my clerical career began in an office full of that sort of men, but commercial courses in high schools and business colleges have produced a new class of office people, as the fiction writer would find by stepping out of Greenwich Village long enough to investigate.

For eight hours per day the office people live together and must wear their company manners. Few of them have any voice in the selection of their fellow employees. Therefore, it is due them that in selecting clerks and stenographers, certain standards be followed and the people chosen be compatible; that is, somewhat the same in education and breeding. Local people are best if they can be obtained, especially for commercial offices where they deal with the public. The information clerk, generally the telephone girl, should be of pleasant address and have a good telephone manner.

In choosing people for the accounting department, men should be employed as chief clerks on stock records and fixed capital records. Girls can generally do the balance of the work. We have girls who can do general bookkeeping, but never in our experience except under the guidance of a male chief clerk.

There should be at least one first class bookkeeper or accountant in every office. He must know technical accounting and preferably have had previous experience in utility work. You cannot expect to get good accounting done by a cheap man and it is worth while to pay at least one man for his accounting knowledge.

In a small company, I believe it is not necessary to have the chief clerk responsible for discipline, leaves of absence, etc., as the officers can take care of those things. It is not so necessary to pay attention to discipline as in large offices, as the people are self-governing, and plenty of work is the best regulator.

We present our employees with typewritten memoranda showing office hours, vacation privileges, etc. We also ask them to keep salaries confidential and not to discuss facts discovered in their daily work as the business of the company is confidential. This does not apply, of course, to office systems or anything of that sort, but many a company project has been disclosed by employees ahead of time and consequently been hard to perform.

All our clerks are trained, as soon as employed, in the use of the adding machine, calculating machine, and typewriter, in order to make them versatile. Our records are flexible, so that at statement time, the first of each month, or in any emergency, we are able to concentrate our whole force on the work in hand. Routine work is divided according to the ability of the clerks; that is, the division of work depends on who is working for us at the time. We do not assign so much work to each desk and then find somebody for the desk, but having a small force of clerks, fit the work to the clerks and try to distribute the load so that no one will be overloaded. There was a time when each clerk worked for a certain company and very carefully guarded himself against being handed any work by the other clerks. In a small office we cannot allow any one to be idle and therefore never divide our work on company lines alone.

We also employ vacation clerks, usually school teachers, although during the summer our stenographers are not very busy and one or more of them may help the accounting department. There is so

(*Continued on page* 166.)

The Gas Oil Situation

Abstract of Report of A. G. A. Gas Oil Committee

Gas-men generally will do well to read this report of the American Gas Association Gas Oil Committee and then file it away for future reference. It gives a clear line on what may be expected during the present year. This report as presented in these columns is a splendid resume of the work of the A. G. A.—Editor

Since the report on the gas oil situation that was presented at the emergency meeting of the Association in May, the gas oil committee has been working to clear up some of the details that were suggested by its preliminary study.

Gas Oil Requirements

The figures presented in the May statement covered reports from 76 per cent of the carbureted water gas manufactured, and the remaining 24 per cent was eliminated from the figures given in Brown's Directory. The revised figures presented in the present statement cover 97.5 per cent of the production with about 2.5 per cent estimated. As expressed in the former statement, the committee has decided to eliminate the Pacific Coast from its consideration. The present estimate is about 7 per cent lower than the May estimate. This is due to the erroneous inclusion of a certain amount of oil gas as water gas and to incorrect estimates of the proportion of water gas made by some mixed gas plants in the May figures.

Production

During the past year, in response to the greatly increased demand and stimulated by the increases in the price of crude oil that took place during the early part of the year, the oil producers have been able to make a very great increase in our available supply of crude oil.

During the first eight months of this year, the domestic crude production increased 46,000,000 barrels over the production of this same period in 1919 and indicated a probable production for the year of 435,000,000 barrels.

There has also been a great increase in the importation of Mexican crude oil. During the first eight months, we have imported oil at a rate which indicates a total importation for the year of between 85,000,000 and 90,000,000 barrels, which is nearly double the amount imported in 1919. During the past two months our production plus imports has been at the rate of nearly 600,000,000 barrels per year.

The first eight months of this year shows an increase in the daily rate of production from 1,096,000 barrels in January to 1,263,000 in August, a little over 15 per cent.

Wells Drilled

The great increase in the production in the United States has been due to the tremendous activity in drilling. In the first eight months of 1920 approximately 22,000 productive oil wells were completed. This is about the same number that were completed in twelve months of 1919.

Had the oil operators not been handicapped by a great scarcity of well casing and labor and very high operating costs, an even greater number of wells would probably have been completed.

The number of productive oil wells completed has varied with the average field price of mid-continent crude. This indicates in a general way how the oil industry responds to the demand as evidenced by the price of crude oil.

Consumption

The consumption of oil at the present time is at the rate of approximately 600,000,000 barrels per year, and indicates the reason why we must not only continue to increase our domestic production but must continue to import oil from other sources.

Refining

According to the Bureau of Mines on January 1, there were in the United States 373 completed oil refineries with a total refining capacity of 1,530,565 barrels per day. There were 99 refineries with a daily capacity of 263,000 barrels in course of construction. When these are completed, the U. S. will have a refining capacity in excess of 650,000,000 barrels per year. The August figures showed 322 refineries operating with a daily capacity of 1,671,495 barrels.

The production of domestic crude will probably be in the neighborhood of 435,000,000 barrels and the importations of Mexican crude probably 90,000,000 or a total of 525,000,000 barrels so that the United States is evidently somewhat oversupplied with refining capacity.

There has been a steady increase in the production of gasoline and while the production of gas and fuel oil has shown an increase in the total, there has been a decrease in California which has been overcome by a considerable increase in the Eastern coast district.

The question of the available supply of gas oil must be discussed in the light of several factors.

1. The demand for gasoline.

2. The demand for fuel oil by the shipping board, navy and mercantile marine.

3. The demand for fuel oil by the other industries in the United States.

It appears from the statistics that the increase in the importation of Mexican crude oil should very largely cover the increase in the demands for fuel oil by the navy, shipping board and mercantile marine.

The increased cost of fuel oil and the difficulty of securing prompt and adequate supplies has restricted to a very considerable extent the demand in some regions for fuel oil for general and industrial purposes, with the result that there is a considerable amount of this power now being developed with coal and increasing attention is being given to the greater development of water power. These two factors will, temporarily at least, remove some of the strain on the demand for fuel oil originating in the United States.

On the other hand, the demand for gasoline has increased so rapidly and the introduction of cracking stills has come on to so great an extent that the demand for the fractions of crude oil suitable for use in this process has greatly decreased the amount of gas and fuel oil available.

Figures have been quoted to the committee indicating that in 1919 approximately 15 per cent of the gasoline was produced by cracking processes and in 1920 probably 18 per cent of gasoline was produced by cracking processes. Assuming that for each gallon of gasoline thus produced, two gallons of gas oil are required, in 1919 probably 26,000,000 barrels of gas oil were utilized in this manner, while in 1920 probably 35,000,000 barrels were required. This indicates that if the present rate of consumption continues there very shortly will be no distillate gas oil available for the gas industry, unless it is willing to compete in the open market for gas oil at its gasoline value.

We have been producing more gasoline than we have required for our domestic consumption.

In this connection, the increasing production of light Mexican crude which contains between 10 and 12 per cent of gasoline will be a factor that will relieve to some extent the strain on our domestic production, as even if it is not shipped to this country it will relieve the foreign demand and thus cut down our exports.

Future Supply

It appears from the foregoing that certainly as far as distillate gas oil is concerned the supply is apparently going to be limited in the future, and while there may be some temporary variations due to the discovery of new fields, the price of gas oil in the future will probably be a competitive price, not a by-product price, and will therefore be influenced and bear some relation to the wholesale price of gasoline.

Regarding possible substitutes for distillate gas oil the committee has made an arrangement with the American Petroleum Institute to make a very complete survey of all the possible sources of material that exist in commercial quantities and that would be available to gas companies.

Transportation

Regarding railroad transportation, the situation has improved considerably during the last two months. This improvement is evidenced by the fact that refineries in the mid-continent field are now offering occasional lots of oil for delivery on the Eastern coast indicating their confidence that their tank cars would be handled in a reasonably efficient manner.

The increase in freight rates due to the new schedule, has created a number of complications with reference to marketing practice and has apparently considerable distance from the consuming centers.

At the present time, the increase in freight rates has made the price of oil delivered from the mid-continent field on the Eastern coast rather prohibitive as compared with oil shipped from the Gulf by water, at what we anticipate would be more normal charter rates.

Operating Difficulties with Heavy Oil

This committee has been following as closely as possible the operation of its plants that have been using heavier grades of topped crude and has been collecting some figures in an attempt to determine the viscosity at which oils can be handled cold and the effect on the water gas tar both as regards its quality and quantity.

With respect to the formation of tar the figures collected by the committee indicate one point that seems to be of importance to call attention to at this time and that is that the figures given in the mineral industries of water gas tar produced are too low and probably refer only to water gas tar sold and not used in the plants. For instance, in 1918, the figures in mineral industry indicates about 53,000,000 gallons of water gas tar produced. This would be equivalent to only about 8 per cent of the gas oil used whereas the figures corrected by the committee indicate that the figure for 1918 was probably nearly 15 per cent.

There is some evidence to indicate that with smaller quantities of oil used per thousand there is a decrease in the percentage of tar formed and analyses of tars made from distillate oils and the heavier topped crudes indicate a very considerable difference in the specific gravity of the tar, distillation and free carbon. The tar from the heavier crudes being higher in gravity contained more free carbon and showed smaller amounts of distillate. This results in a much more viscous tar and one from which it is more difficult to separate the water.

Mexican Oils

The committee has no new information regarding the use of crude Mexican oil but it understands that favorable results are being secured on some experiments on the removal of sulphur from gas high in fixed sulphur compounds such as would be purchased with crude Mexican oils containing high percentage of sulphur.

Prices

There has been, as far as the committee can learn, but little change in the price situation regarding gas oils. The nominal quotation on the Eastern coast appears to be about 12¼ cents f. o. b. refinery. The prices of mid-continent gas oil shipped in tank cars to the Eastern coast with the new freight rates are

apparently higher than this price. It appears to be a fact, however, that there is a tendency to offer small lots of gas oil which is some advance over the situation last spring when nothing would be offered.

It is reported in the technical press that within the past few weeks there has been considerable softening in the market for fuel and gas oil in the mid-continent field, due to the considerable slackening off of manufacturing, with a decrease in demand for these products. A number of smaller refineries are reported to have closed down.

It is reported that except for some special oils premiums are no longer being paid on crude oil in the mid-continent field and that there is a slackening off in new drilling in anticipation of a possible cut in the price of crude oil.

It is hardly to be expected that there will be any very considerable change in the price of gas oil before there is a change in the price of crude oils.

Apparently, with the somewhat general slackening off in manufacturing and with the increase in transportation facilities, there should be a more plentiful supply of gas oil available on the Eastern coast during the coming winter, 1920-21.

General Situation

One feature of the general situation that has been brought out in conferences with petroleum refiners is the fact that in a large number of cases gas companies have a relatively small storage capacity for gas oil.

The oil refiners have suggested that it would be advantageous for gas companies to have a rather large shortage capacity.

They suggest that this would be of advantage both to the oil industry and to the gas companies in that the gas companies would then be able to take advantage of periods of low prices for gas oil and on the other hand it would relieve many of the smaller refineries considerably to be able to dispose of their product of this fraction during the summer.

The possibility of saving by the ability to purchase odd lots of oil at low prices would, of course, have to be balanced against the increased capital charge for the storage facilities and the carrying charges of the stock of oil.

It appears to the committee that Mr. Welsh, the secretary of the American Petroleum Institute, has summed up the situation rather aptly when he said that at the present time the ultimate consumer who is the final determining factor in how oil should be used is apparently preferring to use it as gasoline in automotive engines instead of as city gas in his kitchen range and that this is his privilege as he pays the bill and that "your willingness and ability to pay the market price justified by competitive conditions is the only way out of your difficulty."

Technical Committee—E. H. Earnshaw, R. B. Harper, C. A. Lunn, E. C. Uhlig, J. F. Wing, W. H. Fulweiler, chairman.

Gas Oil Committee—D. D. Barnum, R. B. Brown, L. R. Dutton, J. B. Klumpp, chairman.

Michigan Utilities Have Unique Plan

Information Committee Proceeds Along Original Lines

By HENRY W. DOUGLAS

Chairman, Michigan Committee on Public Utility Information

Anything that is news is going to be furnished to the newspapers of Michigan by the Committee on Public Utility Information. This is the right idea. The principal advantage to be gained will be that every newspaper article will be based on facts. No more speculation for those companies.

This is a great start and we hope they will be able to keep it up.—Editor.

Ann Arbor.—Inspired by the conviction that, as the only customer of utilities, the public is entitled to know about their business and should be apprised of their problems, Michigan's gas and electric companies have co-operated in the organization of a committee on public utility information. It is designed to create a more sympathetic understanding of the difficulties attendant upon the production and distribution of light, heat and power and will operate on the premise that the facts always will prove the most effective argument.

The Michigan committee on public utility information perhaps has the same purpose in mind that actuates other State organizations of a somewhat similar nature, but it seeks to attain its ends in a little different manner. The Michigan committee realizes that public sentiment largely will be moulded by the newspapers and, while the committee will not concentrate on the newspapers to the exclusion of other agencies for the dissemination of information, it is to the newspaper man it will look for its greatest leverage.

This does not mean that the committee will devote its organization to the distribution of a flood of self-serving propaganda. The exact opposite is to be the rule. It has decided to vary the usual formula of organizations of this character in one fundamental feature—it will not send out frequent bulletins to the newspapers and others. In fact, there will be no

regular bulletins, at least not until such time as the movement grows and expands to a point where a weekly or bi-weekly publication will be justified by demand. The committee has installed a trained newspaper man of long experience in the field of Michigan journalism because it realizes that serving as the executive officer of a gas or electric company does not particularly fit one to be an impartial judge of news values nor train him in the language and methods and ethics that are peculiar to the newspaper profession.

Have Trained Newspaper Man

Henry H. Tinkham, assistant managing editor of the Grand Rapids *Press*, who has been staff correspondent of that paper and served as its legislative and political writer for nearly twenty years, has been employed as director and his headquarters have been installed at Ann Arbor with the idea of putting him in convenient touch with the chairman and the secretary-treasurer, Herbert Sylvester, district manager of the Detroit Edison Company. Mr. Tinkham has been given a free hand. He has been told that the committee aims simply to provide an agency through which the people and the newspapers may meet the gas and electric companies on the common ground of mutual understanding and that, in the opinion of the men responsible for these utilities in Michigan, the facts always may be depended upon to serve this end.

It is not the idea of the committee to make Mr. Tinkham a gas or electric man. We want him to remain a newspaper man in every sense of the word. It has confidence that, with his knowledge of the newspaper game, he will be able to see the mass of interesting features that go hand in hand with the essential industry of making and selling gas and electricity and will be able to frame them in a way that will carry their own appeal to the editor. As an evidence of the honesty of purpose which actuates the gas and electric companies in their organization of the Michigan committee on public information, it may be interesting to know that its director is authorized to distribute matter that is not particularly favorable as measured by the interests of the utilities, when het facts warrant such distribution.

Will Be "Fact Mill"

To coin a new term, this committee is going to be a hard-working fact mill. Above all it must and will stick to facts. It is anxious that the people have the facts, all of them. It is anxious that the newspapers have only the facts. This accomplished, the committee and the companies it represents cheerfully will abide by the decision of the public.

The committee is not organized in the interest of any one or group of companies. It is to represent the entire industry. To this end it has directed Mr. Tinkham religiously to keep clear of all controversial issues whether local or statewide. It will have no part in politics nor legislative activities. The fear that thoughtlessly it might be construed as a lobby was one of the matters of most serious consideration and the whole plan is predicated upon the fact that, not by a single thought nor action, will it be left open to any such suspicion.

There is no big fund provided for the committee and its work. It is both organized and financed through the Michigan Gas Association and the Michigan Electric Light Association. The secretaries of these associations are charged with the responsibility for levying an assessment from time to time to keep the committee supplied with the necessary resources. The secretaries collect the assessments and turn them over to the secretary-treasurer of the committee. It so happens that Mr. Sylvester occupies the position of secretary of the Michigan Electric Light Association as well as that of secretary-treasurer of the new committee on public utility information. With the chairman and secretary-treasurer are included the following personnel:

The Personnel

A. C. Marshall, Detroit Edison Company; C. W. Tippy, Consumers Power Company, Jackson, Mich.; E. Holcomb, Central Michigan Light & Power Company, Alma, Mich.; J. W. Batten, Detroit City Gas Company; George Lewis, Detroit Edison Company, Ann Arbor, Mich., and Frank A. Newton, Commonwealth Power Company, Jackson, Mich.

In addition to the plan outlined to make facts easy of access to the newspapers in the shape of articles of real news value, the committee will carry out the suggestion contained in its title. It aims to accumulate a comprehensive library of information regarding every phase of the business of producing and distributing gas and electricity and covering matters bearing especially upon the public relationship of utilities which come under this classification in Michigan. In the formal announcement that has been given wide publicity in the State and has received universal editorial approval, everyone is invited to come to the committee headquarters for any information with regard to the utilities the committee represents. In this invitation, the committee has pledged itself to furnish only the facts. It will furnish facts no matter what may actuate the inquiry and it will refrain from any effort to color or qualify them. Newspapers, colleges, libraries, commercial organizations, schools, industrial and manufacturing institutions and individuals—in short, every one is invited to come and learn. To apply a good old card-room term, the idea is to lay all the cards, face up, on the table.

Michigan utilities realize that they must be on friendly terms with their patrons. The one big idea behind the committee on public information is to promote friendly relationship through a thorough mutual understanding. The gas and electric companies have nothing to conceal. There is nothing in the industry of serving the people with such fundamental necessities as light, heat and power of which we need be ashamed. The companies are proud of the fact that industrial development in Michigan and even home comfort and the very morals of the State depend upon them.

With a business such as this, why should we not put all our goods, all our methods and all our policies in the show window, where every one who cares to see may have a look. That is the purpose of this committee.

It is to be the show window for Michigan gas and electric companies.

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SIXTY-FIRST YEAR

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Contents of This Issue

GAS LIGHTING—BY A. J. SMITH 157

OFFICE WORK IN A SMALL COMPANY—BY PAUL B. MURPHY 159

THE GAS OIL SITUATION 161

MICHIGAN UTILITIES HAVE UNIQUE PLAN—BY HENRY W. DOUGLAS 163

EDITORIALS 165

PUBLIC UTILITIES SECURITIES MARKET REPORT ... 172

NEWS OF THE GAS INDUSTRY 173

As the Journal Views It

An Experiment

Out in Michigan the operators of the various public utilities have formed a committee on public information that is unique in many ways, but one which we predict will be extremely successful. This committee has announced that it will not only supply the news which is favorable to the various industries which it represents, but that it will also furnish everything that the newspapers are interested in. This attitude on the part of those at the head of the committee is going to have a decided influence on the newspapers. In the first place, it is going to assure the various companies of having the facts printed without having a lot of speculation or rumors spread broadcast.

In the second place, it is going to assure the committee that its releases will have careful attention from the editors, and this is going to mean that a lot of interesting information about the various companies is going to see the light of day by means of print that otherwise would be lost.

There is the third angle to this situation also that commends itself. When the general public realizes that the utilities which serve it feel that there is nothing to conceal and that, on the contrary, the companies are turning the light of day on the situation, then surely there will be a wave of confidence spread that will brook of no turning.

There is no side to the situation that does not have its appeal. The experiment will be watched with a great deal of interest on all sides.

Gas Lighting

The members of the New England Association of Gas Engineers heard some pertinent facts regarding

the industry at their convention held the middle of this week, but the many excellent papers and the discussions which followed will do much in helping to meet the problems of the coming months.

One of the outstanding features of the convention was the restoration to the program of a paper on gas lighting. This subject had not been discussed for several years past, but the interest that was exhibited showed how important it was considered by the members. New England gas men were pioneers in this important branch of our business, and when they dropped the subject from their meetings it was felt that gas lighting had lost its last friend.

The keynote of both the paper and the extremely interesting discussion which followed was optimism that it is going to be possible this year to set new marks in gas consumption figures.

This is an important matter, one which warrants the thought and time of gas men generally, for it is the one point that electric men have found on which to base their keenest competition.

It is to be hoped that sections other than New England will follow in this lead and start an aggressive campaign.

A Newspaper's View

When a newspaper that has no particular ax to grind expresses itself forcibly on the subject of gas supply and does not hesitate to call a spade a spade, then we believe that it is fulfilling its duty as a mouthpiece of the public. Such is an editorial that was printed recently in the Jefferson (Ohio) *Gazette*. It is so concise and succinct that we are printing it exactly as it appeared in the columns of that newspaper. Gas men generally can use it where it will do the most good.

> The city of Cleveland is about to learn a lesson. That the natural gas supply all over the State, Pennsylvania and West Virginia is nearly at an end is well known to all who honestly study the question. Cleveland has a lot of politicians in its city government who believe they can make capital out of the situation and refuse to permit a reasonable increase in the price of natural gas. The East Ohio has made a fair offer, but the city officials have refused the offer and demand a ten-year contract at 35 cents per thousand cubic feet. The gas company has served notice that gas will be shut off, but offers to continue service until May 1 at the old rate if the city will concede that none of the gas company's rights have been forfeited by this generous consideration. The city refuses to concede anything and intends to ask for injunctions in State and Federal court. When the politicians are all through they will find that not even injunctions can make gas come through lines if the gas is not in the wells, and the only way gas can be conserved for domestic purposes even for a short time in Cleveland is to make the price too high for industrial purposes and high enough so that men can afford to take the risk of finding new gas pools. It costs double to drill now what it did three or four years ago, and the chances of getting large wells have practically disappeared anywhere in Ohio, Pennsylvania and West Virginia.

Gas as Insurance

Recently a high police official who is known all over the world for his capabilities made the statement that a single gas light left at night in a store was the best burglar insurance in the world. This was a new way of regarding gas, it seemed, for nobody, we believe, has given a great deal of thought to the fact that gas can be used to keep burglars away.

How many stores are there in your town which are left dark at night? It might not be a bad idea to make a canvass, and then arrange to see the proprietors and attempt to sell them gas for lighting. This, it seems to us, is one of the best methods of approach in connection with the sale of gas for lighting purposes that has yet come.

The fact that gas can be used to insure the safety of property can be applied to residences also. At any rate, it is well worth considering.

Office Work in a Small Company

(*Continued from page* 160.)

much routine work to be done that we do not let it accumulate during the vacation period.

Purchasing and Receiving

One man responsible for purchasing, or at least placing orders, will avoid duplicated stocks, or over stocks, and when buying for a number of districts can save money by buying in quantity.

Some form of purchase order is advisable.

Our purchase order forms are the same as usually used. We omit the receiving report. We have very few part shipments and, therefore, are able to arrange our purchase order form so that a carbon copy becomes the receiving record. On this copy the receipt of the shipment is noted, from it the invoice is approved, and on it is placed a record of that approval.

The same wording is printed on our local requisitions, the form made in pencil for local purchases. This saves making separate receiving reports and keeps the invoices in the offices. To aid in approval of invoices we have placed our requisition books with certain hardware dealers or machine shops in our village so that when a man is sent in a hurry without an authorized requisition, the clerk in the store has him make out a requisition and sign it and take a copy along to be approved.

Storekeeping

Storekeeping is difficult without a central storeroom system. That is impossible in our territory because of the distances and weather conditions. Small stocks of materials must be kept where necessary and with a few exceptions we must depend upon our foremen, operators, garage men, or engineers, etc., for records of materials taken from or returned to stock.

Each branch office has a perpetual inventory stock record and has supplies stored in from one to five places.

We use card ledgers for stock records and are now installing the visible kardex system in one office to save time in posting the numerous receipts and disbursements.

We have only one girl who can successfully handle stock records. Boys are best and they must handle the supplies to be able to keep intelligent records.

Stenographers

It is necessary to have a central force of stenographers, it being an utter waste of money to have one stenographer for each official.

I believe it is possible to have at least one girl who is not a shorthand expert, but who can do copying and save the time of the higher priced girls.

I also believe in dictating machines and I know of one wholesale store where ten men do a little dictating each day and one girl does all the typing for that office.

In order to secure the best services, it is necessary that the stenographer's chair and machine be arranged so that she can work in comfort. The chair must have a good back rest and the typewriter must be neither too high nor too low. The best copyholders are those that stand back of the machine so that the operator does not have to turn her head to read her notes or copy.

Dictated letters cost about 30 cents each, so for interoffice and office correspondence we write or reply by penciled notes when messages are short.

There are some screw letter presses left, though I believe they are mainly confined to the lawyers' offices. I know a superintendent of mines who never adopted carbon paper and after writing all his letters before breakfast placed them in the letter book and copied them by sitting on the book while he ate his breakfast.

Filing

We have progressed from each stenographer doing her own filing, which meant piled up baskets full of unfiled material, to a single filing clerk who handles everything in the office except the engineer's blue prints and the confidential file of the president. Recently an expert went through our files and got them all in one place and we now have a compact, well arranged, simple filing system without any particular frills. It cost us about $200, and it has saved that much in time already.

The filing clerk also takes care of catalogues, all transfer records from all departments, including log sheets, curve drawing meter readings, cancelled checks, old ledgers and vouchers. Small supplies of special blanks, such as income tax forms, are filed in folders.

One small safe containing three vertical file drawers holds all the valuable papers of the firm, like deeds, easements, contracts, etc., which are arranged the same as any files and are registered, cross-indexed and cross-referenced. The filing system, or lack of system, in any office can give more comfort or misery than any other single system.

I can't bring myself to spend much money on transferred records not in regular use. Correspondence and report files must be maintained but the best expenditure is for shelving in a clean and accessible place where there is light and air. I detest vaults and believe it better to put money into safes and light-weight cabinets. If the building is good there is not much danger of fire.

Filing space can be conserved by the general practice of destroying letters, memoranda, and any papers that have served their purpose and have no reference value. I have at odd times, especially when searching old files for some paper needed at once, destroyed hundreds of letters that had no reference value. The authority to destroy old files cannot be many but current papers can be judged by the executives and clerks and much filing space saved in addition to saving the time of the filing clerk.

Accounting

If I were talking to accountants only, I would discuss accounting of the small company in detail, for a short cut or refinement here and there makes the difference between Chinese labor and intelligent bookkeeping. But accounting is not interesting as a platform subject, so I will be merciful.

Form of Statement

What is the accounting department good for? Simply to tell the boss regularly and promptly what we have, what we owe and how much we are making. We must also be able to tell the State and Uncle Sam the same thing with variations.

How it is told, that is the form of statement, makes all the difference in the world. Printed trial balance, condensed balance sheets, and profit and loss statements, must be provided for the bookkeeper if you expect to get statements in the same form, with the items in the same groups or orders each month. It does not cost much, and intelligible statements are ammunition for the executive if received by him early each month.

The commission's schedule indicates what accounts should be kept in the general ledger and the main books should not be cluttered up with other accounts.

The income or profit and loss statement used by the Commission is too technical for the average executive and a simple form showing revenue less expenses and fixed charges, leaving profit and loss is best. This statement should not contain more than a dozen items, but comparative figures for the same month last year and totals to date for current year should be shown.

This statement can be completed in any office by the 10th of the month at the latest. For ammunition purposes it must be ready by that time—after that it is merely history.

The balance sheet showing what we have and what we owe will not crowd a single sheet of paper. Any executive should be able to read and analyze a bal-

ance sheet and profit and loss statement because they show the results of his labor. The accountant should know his man, however, and if advisable not hesitate to show on the balance sheet "Cash in the bank, due from consumers, material and supplies in our storeroom, unpaid bills, notes payable by us," etc., instead of the more technical terms. Also, there should be footnotes explaining items larger or smaller than usual. If the power plant was shut down for repairs or the water was low or income taxes paid, or some power customer had a strike in his plant, say so on the statement while the facts are fresh in mind.

Statements showing where the revenues came from and the operating expenses in detail are prepared from the subsidiary books as soon after the 10th of the month as possible. For quick work and standard form these also are printed for the bookkeeper. Operating accounts are kept by districts and transmission systems as each district must earn a fair return on the capital in service and in these days of high cost of living and increasing rates, guesswork will not get you far in a rate case.

The engineer has no exclusive franchise on the art of making pictures from figures and the accountant, at times can show comparisons and development better by plotting curves than by statements. A clever clerk can do the mechanical work in making these curves. Charts are used to show the progress of office work or the organization of an office or company.

Form of Records

We use loose-leaf records exclusively—that is, have no bound books.

What! A book with loose leaves for the general ledger; cries the old gentleman with the long, gray whiskers. "Suppose the wind should blow away one of the leaves?" Salesmen for loose-leaf companies tell us that there is always a strong wind blowing in the office of a man who copies his letters by sitting on them.

Loose-leaf records are flexible and easy to rearrange. We use the same schedule of accounts for seven of our ten companies and by keeping our records in loose-leaf binders, we are able to arrange them and rearrange them so that each clerk will be doing the best work of which he is capable.

Cost of using loose-leaf records for current use and binding them for reference is no more than buying bound books in the first place and the increase in efficiency derived from the use of loose-leaf for current records is also a direct saving in clerk hire.

For an ordinary office, only three books are essential—ledger, cash book and combination journal and voucher register. Ask your bookkeeper how many principal books he has—pin him down and see that three is the limit, any more means that you are paying one or two clerks that you do not need. Any number of subledgers may be kept, the size of the company determines their necessity. An analysis of certain accounts once per year may be cheaper than keeping the secondary records. Apply the dollar test and see if your need for information and the requirement of the commissions can't be satisfied with less records, and consequently less expense.

Voucher System

No company is too small to use the absolutely essential voucher system in some form. The hip-pocket ledger and the filing of paid bills in a stove-pipe hat, in pigeonholes or even loosely in box files are inadequate in these commissions regulated and income taxing days. The voucher system is the best method so far discovered for recording and filing paid bills.

The idea of combining the journal, sales book and voucher register cost us 25 cents. These records are as homogeneous as flapjacks and maple syrup. Journal vouchers and cash vouchers are entered in the same series and, being identical in size, are filed in the same vertical file. The number shows the month in which recorded and the voucher number in that month—1001 is the first voucher in January; 2001 the first in February, etc.

I am aware that the Public Service Commission is on record in favor of numbering vouchers serially by the year, but that is for the benefit of their examiners while the office force is accommodated much better by using the monthly serial system.

All forms that are eventually attached to vouchers are about the size of the voucher form.

We keep sample journal vouchers ready, and about fifty vouchers per month are type, minus the amounts, by the telephone girl or one of the stenographers during spare time. Amounts are put in by the bookkeeper. All this work done ahead of time saves minutes when the monthly statements are being prepared.

Indexing vouchers is by card record, each card showing the name of a certain form or individual. The vouchers are indexed by year, number and amount. There are no months or years printed on these cards and the index is more legible than the checkerboard pattern formerly used.

Cash Record

The cash record consists of an account with each bank, so that all cash received and paid out is recorded according to the bank account it affects. A deposit record in each account obviates the use of check stubs. To make a memo of the balance at each bank is a question of a few moments at the adding machine with the cash records each morning.

To please the fussy accountant who does not like to have a mess of deposit slips of all sizes from different banks, we have standard deposit blanks in duplicate. The perforated deposit slip, when detached, is the size of a check and suits the bank teller. The duplicate, when O. K.'d by said teller, is filed in a binder in our office.

Prepaid and Reserve Accounts

We carry prepaid and reserve accounts only when the amounts involved are large enough to justify the extra work. Taxes, insurance, interest and depreciation are the principal items.

Unless one is willing to pay for having each month's proportion of taxes, interest, etc., show on the monthly statement, these more or less estimated accounts are not necessary. Many companies do not keep them at all, recording interest, taxes and insurance, when paid, and depreciation once per year. If a company had issued bonds, the interest should be recorded monthly.

Depreciation is all bunk, according to some of our

distinguished friends who say, "There ain't no such animal," while others would have the 1921 model called "retirement expense." Depreciation, or amortization, or retirement expense is all guesswork any way, and a single average rate can be fixed on all tangible fixed capital and one-twelfth of the yearly rate recorded monthly. Do not deduct repairs but fix the rate accordingly.

Taxes, except income taxes, may also be estimated and one-twelfth deducted each month. Federal income taxes should not be paid from or charged to a reserve account by any company large or small. Uncle Sam has ruled that payment from a reserve account necessitates the capital invested being averaged up to and after the payment date. This results in the reduction of invested capital on which a return is allowed, and in a higher income tax.

Job Order System

Some system is necessary to find the cost of each job or project of new construction or reconstruction. A separate account in the ledger may suffice for the company with very few employees. We use the orthodox job order system and, in addition to giving us the cost of each job, it tells us in what tax district the labor and material were expended. This helps in preparing the report for the State Tax Department.

Pay Rolls

It is essential for the company to have a daily report for each wage-earning employee, showing how he spent his time. This is the basis for calculating his pay and for correctly charging up his time. I mention this because there are companies who do not use daily time reports, but I believe they should.

We keep an individual pay-roll record for each employee. Besides producing the figures for the weekly pay roll, it saves work when we report to Uncle Sam the wages of all employees earning $1,000 or more per year.

Tax Records

Our tax assessments are recorded on cards, one card for each assessment, divided according to tax districts, thus we can compare the assessments year by year.

We inquire for the amounts of assessments about one month before the tax rolls are open for inspection as we have found it easier to persuade assessors to reduce assessments before they are copied in the tax roll in ink.

Insurance

We have an insurance record on cards, showing one parcel of insurable property each. For convenience, we try to have all policies written to expire July 1. By reading up on this subject we saved some money this year through co-insurance and writing insurance for three years at two and one-half times the annual rate.

Branch Offices

The territory in which we operate is about half the size of Connecticut, though thinly settled. Through five local offices, 20 to 45 miles apart, we serve five villages of from 4,000 to 15,000 each and a number of smaller communities.

The manager of each district, in addition to his many other duties, is responsible for the accounting in his office and has from one to six clerks who keep records for consumers, meters, stock and pay rolls.

The practice of utility companies in general in regard to branch office accounting may be found in the National Electric Light Association report for 1916.

We have the same forms and systems in use at all our branch offices, conditions permitting. These systems are kept up to a standard by the use of an office manual and by monthly audits by men from the main office.

These manuals are typewritten instructions in loose-leaf binders on file in each office, being the Bible of our clerks. Any suggested changes in system are thoroughly discussed by all interested, and if a change is made a new sheet is issued for the office manual and only one sheet is affected.

Consumers' Ledgers

Our consumers' ledgers consist of individual account ledger sheets filed vertically in steel trays, each tray holding about 1,500 accounts arranged according to the kind of revenue and street address.

Each girl keeps from 1,500 to 1,700 accounts, doing all the work incidental to billing, posting and making revenue reports. I am certain that none of our clerks could handle three or four binders containing the same total number of accounts and do the other work required in a small office.

Central Accounting

I am aware that the trend is towards central billing and accounting, but our transportation facilities are poor about half the year and either a leased telephone line or a private telephone system would be very expensive. So far we have not cared to attempt it as our desire to economize and our aim to please are at dead center.

With all consumers' accounts in one office, we could use bookkeeping machinery to advantage, but 3,700 accounts is the maximum in any one office at present and our investigations lead us to believe that less than 5,000 accounts can be kept as cheaply by hand as by machinery. Mossback, you may say. Maybe, we shall be glad to hear testimony on this question.

State Reports

The reports to Public Service Commission and State Tax Department are bugaboos and various associations have made efforts to secure some reduction in the requirements of these reports. I believe it is the duty of every accounting man to inform his stockholders that much absolutely useless information is required at great cost in time and effort, resulting in no material benefit to any one.

Both commissions have discretionary powers in regard to how much information they shall require. The Public Service Commission should not ask for any more information than it publishes in the annual reports. This would cut down their requirements about one-half.

The State Tax Department needs only a few, though voluminous, schedules to fix the special franchise assessments.

Some time ago I wrote a dozen companies of the same size as our organization and asked whether the bookkeepers or the engineers were responsible for the valuations attached to the State tax reports. I learned that, with one exception, the bookkeepers are the goats. This makes it necessary for the accounting department to have fixed capital records that are divided according to tax districts.

Our fixed capital ledger has sufficient columns to analyze all poles, wires, transformers and meters by sizes.

The Tax Department has ruled that all revenue from sales of current originating from lines, even partly in streets shall be classified on the annual report as revenue in streets. Therefore, only the merchandise and miscellaneous revenue and sales of current carried on lines absolutely on private right-of-way should be included in revenue out of streets.

The net earnings theory in use by the State Tax Department was fully explained in a recent Journal of Accountancy by Martin Saxe, former head of the State Tax Commission. From this we worked out a formula by which we check our special franchise assessments. We also consider all special conditions that might affect the assessments.

Conclusion

All but one of our companies operate in a single village, so that the systems described can be used by the smallest company. With no branch office problems, there are short cuts possible, but most of the systems described I believe to be essential.

The office man must be progressive and, as I said in the beginning, not be afraid to do a little pioneering. The Public Service Commission law has ventilated the accounting systems of the utility companies and this publicity has been good medicine for the accounting methods. Many an antiquated system was concealed beneath the veil of privacy.

If we don't progress we are like the old man with the wooden leg:

There was an old man and he had a wooden leg,
And he hobbled all about on his artificial peg.
He hobbled to a bar (this was many moons ago)
And he stayed there longer than he'd really ought, you know.

In the wee small hours he essayed to travel home,
All unsteady on his legs and bewildered in his dome;
But he hadn't got far when his aboraceous pin
Struck a hole in the pavement and he slipped right in.

Yes, it slipped right in and stuck right tight
And the owner of the limb was anchored for the night.
Did he holler for help? He assurely did NOT;
For he never knew what happened, this befuddled old sot.

But he hobbled right on with his one good prop, and
He never stopped to think and he never thought to stop,
And his ligneous limb still stuck right tight,
And he walked around himself through the holdam night.

His descendants still abound and their origin they prove
By the way they do their work in the same old groove;
Using methods that were good back in eighteen eighty-four,
They walk around the circle every time they think once more.

How can the office man in a small company be progressive when he is tied down by routine and hasn't the educational opportunities of the city man? By reading and by visiting the neighboring utility companies. As the utility business is not competitive, the experience and assistance of all the utility companies in the country are ours upon request.

Gas Lighting

(*Continued from page* 158.)

be charged to distribution expense, instead of to new business, as a good many companies have been doing. Most public service commissions are very willing to allow this cost to go into operating, and it is my opinion that it is much wiser to take advantage of this circumstance and spend 2 or 3 cents per thousand cubic feet of gas sold and keep our lamps always in the best condition, rather than to endeavor to save this money and eventually have the rates reduced. With our mains, services and meters already installed, does it not seem feasible and good business policy to spend, in saving our present business, at least a small proportion of what it would cost to secure a new consumer of equal revenue?

Lamps, fixtures and glassware should be sold at a profit. This profit should not be a haphazard affair but worked out on a basis that will give a consistent profit on all sales, the same as any other merchandising proposition.

In selling gas lighting we should have competent salesmen, and they should be backed up with newspaper advertising, window displays and well-written circulars for distribution. I have found an excellent way to introduce a salesman, especially if he is working on a special campaign, is to mail a personal letter to the consumer, a day or two before the salesman makes his call, acquainting him with the proposed call and its object. This saves the time of the salesman and the consumer, and works out well in most cases. Every gas salesman should know something about illuminating engineering. Books dealing with illuminating engineering are now becoming so common that the average salesman can master the principles of this new science by an ordinary course of reading.

Value of Window Displays

One of the best methods of advertising gas lighting is by the use of neat and attractive window displays. We recently brought out some original ideas from our employees by giving a cash prize for the best window display. Each employee thought out his own idea and arranged his own window. The first-prize winner had

a display called "The Advance of General Gas Light," which consisted of a large number of toy wooden horses. Each horse was piped so that a lamp could be mounted on his back. These horses were arranged in platoons, the riders being represented by a lighted lamp. The General in command consisted of a large horse carrying a large lamp. This made a vivid display and attracted a great deal of attention. Another display, "The Charge of the Light Brigade," consisted of an army of two hundred lamps arrayed in battle formation. Each lamp had concealed piping attached from under a field of grass sod, and when lighted they made a fine exhibit marching down the field. These are only illustrations of attractive window displays which can be made to keep the public's attention on gas lighting.

Newspaper advertising is the most valuable when used at regular intervals. Good, straight-from-the-shoulder facts about gas lighting are the best kind of copy, and when persisted in will produce results. Intermittent advertising in newspapers is almost useless.

Should Resume Gas Lighting

Now that the times are becoming normal again, Gas Lighting Week should once more be inaugurated. I think 1915 or 1916 saw the last attempted Gas Lighting Week, and I hope 1921 will start the ball a-rolling again. A National Gas Lighting Week can be made of exceptional interest to the public and value to the gas company. Results tell the story, and the results in these former Weeks were so positive as to leave no room for speculation.

Some of the most successful lighting installations today are those made within a few years, where a special study has been made of the situation so that adequate piping could be installed. Houses built a good many years ago and piped with small piping are a menace to good gas lighting. These small lines easily become stopped up and cause poor pressure and pilot-light troubles. When a residence is piped with the proper sized pipe, backed up by a good-sized service and main, a lighting installation that cannot be beaten can be made with the use of modern gas-lighting appliances.

I have a residence installation in mind where the street main is 6 in., the service 1½ in., the house riser 1¼ in. and the house lines averaging not less than ¾ in., where practically no trouble is experienced with the lighting equipment. The large piping assures uniform pressure through the entire house, and pilot-light troubles are reduced to a minimum. This lighting system is controlled by magnet valves located in the canopies of the fixtures, and one ordinary dry-cell battery operates these valves. The wiring is all concealed, giving all of the so-called convenience of electric lighting, together with the soft, white light only obtainable with a gas-mantle burner.

I believe architects should be given all possible information in regard to the proper sizes of pipe to be used in piping houses, as good gas lighting depends more upon this than anything else.

The gas company and the manufacturer should work in harmony. The company should keep the manufacturer posted on the qualtiy and kind of gas he is producing, as this enables the manufacturer to supply the proper equipment with his lamps for each situation.

In this paper I have endeavored to state in as few words as possible a few of the well-known methods of selling and keeping gas lighting before the public, and to summarize might say:

Be optimistic, not pessimistic, over gas lighting.

Preach the hygienic value of gas lighting.

Furnish regular maintenance service of residence lighting, charging for material, not for labor.

Advertise, snappy newspaper copy, better window displays, general publicity of all kinds.

Commend and support the manufacturer.

Educate and encourage the salesman.

Work with and enlighten the architect.

In short, do everything in our power to push gas lighting, and keep the white lights burning!

Removal of Sulphur from Gas by Oil

The large amount of organic sulphur in the gas produced from Nova Scotian coals has always been a serious problem at Halifax. Laboratory experiments were undertaken with a view to ascertain how much the sulphur compounds could be reduced by washing the gas with paraffin oil. The results were surprising, for it was found that a reduction of 75 to 80 per cent could be obtained if sufficient oil were used. Kerosene, straw oil, such as is used for toluol and benzol washing, and light lubricating oil were all found to be effective. Experiments on a somewhat larger scale established the fact that if the coal could be successfully redistilled and the process made continuous, this method would prove to be the quickest and best way out of the sulphur trouble. Efforts are now being directed to this end with promising results. A steam distillation of the oil in the dephlegmating column of a tar still demonstrated that the oil can be cleaned up, and further laboratory tests with the small scrubbers showed no falling off in its absorption capacity.

The proposed installation of washers will be placed immediately after the purifying boxes. There will be three steel towers four feet in diameter by sixteen feet high, filled with wooden grids and arranged in series. Fresh oil will enter the last scrubber and, overflowing from this, will be pumped over and over in the first and second scrubbers successively. For the pumping a battery of motor-driven gear pumps, each having a capacity of about 600 gal. an hour, will be used. The saturated oil from the first scrubber will overflow to a storage tank located near the still; and when sufficient has been accumulated, it will be steam distilled at a low temperatur to remove the carbon bisulphide, and then pumped to the fresh-oil tank to be recirculated. Laboratory results indicate that from 0.5 to 1 gal. per 1,000 cu. ft. of gas will reduce the sulphur over 50 per cent.

Annual Convention of Tri-State Water and Light Association to Be Held June 15 and 16

Atlanta, Ga.—The eleventh annual convention of the Tri-State Water and Light Association of the Carolinas and Georgia will be held at Asheville, N. C., June 15 and 16. Notices calling attention to the meeting and urging attendance have been sent to the members in the three States by W. F. Stieglitz, of Columbia, S. C., secretary. In addition to the membership in the three States named there are associate members from nine other States.

Public Utilities Securities Market Report

Prices of Representative Gas Bonds

(Quotations furnished by The National City Company)

Company	Issue	Maturity	—Market— Feb. 17, 1921 Bid	Asked
American Lt. & Trac. Co.	Five Year 6s	May 1, 1925	90	92
Brooklyn Union Gas Co.	First Consol. 5s	May 1, 1945	74½	75½
Columbia Gas & Elec. Co.	First 5s	Jan. 1, 1927	85½	87
Consol. Gas, Elec. Lt. & Pr. Co. of Baltimore	First Ref. 7½s	Dec. 1, 1945	99	100
Consol. Gas, Elec. Lt. & Pr. Co.	General 4½s	Feb. 14, 1935	75½	77
Consol. Gas Co. of New York	Sec. Conv. 7s	Feb. 1, 1925	98½	99
Consol. Gas Co. of New York	One Year Sec. 8s	Dec. 1, 1921	99¾	99⅞
New Amsterdam Gas Co.	First Consol. 5s	Jan. 1, 1948	62	64
Denver Gas & Elec. Co.	Gen. (now 1st) 5s	May 1, 1949	82	84
Detroit City Gas Co.	Gold 5s	Jan. 1, 1923	95¼	97
Equitable Illum. Gas Lt. Co. of Philadelphia	First 5s	Jan. 1, 1928	95	96½
Hudson County Gas Co.	First 5s	Nov. 1, 1949	75	78
Laclede Gas Light Co.	Ref. & Ext. 5s	Apr. 1, 1934	75	77
Louisville Gas & Elec. Co.	First & Ref. 7s	June 1, 1923	93	95
Michigan Light Co.	First & Ref. 5s	Mar. 1, 1946	70	75
Milwaukee Gas Light Co.	First 4s	May 1, 1927	82½	84½
Pacific Gas & Elec. Co.	Gen. & Ref. 5s	Jan. 1, 1942	78	79
Pacific Gas & Elec. Co.	Col. Tr. Conv. 7s	May 1, 1925	96½	97½
Pacific Gas & Elec. Co.	First & Ref. 7s	Dec. 1, 1940	98	99
Cal. Gas & Elec. Corp.	Unif. & Ref. 5s	Nov. 1, 1937	83¼	84
Peoples' Gas Lt. & Coke Co.	Refunding 5s	Sept. 1, 1947	70	71
Chicago Gas Lt. & Coke Co.	First 5s	July 1, 1937	71	73
Portland Gas & Coke Co.	First & Ref. 5s	Jan. 1, 1940	77½	80
Seattle Lighting Co.	Refunding 5s	Oct. 1, 1949	65	68
Southern California Gas Co.	First 6s	Nov. 1, 1950	85	87
United Gas Improvement Co.	Two Year 8s	Feb. 1, 1923	99½	99¾
Utica Gas & Electric Co.	Ref. & Ext. 5s	July 1, 1957	75	77
Washington Gas Light Co.	General 5s	Nov. 1, 1960	76¾	77½
Western States Gas & Elec. Co. of California	First & Ref. 5s	June 1, 1941	74½	76

Annual Report Shows Deficit

Minneapolis, Minn.—The income and expenditure account of the Minneapolis Gas Light Company for 1920, filed with the city controller, indicates a deficit of $10,392.27. Although there was a net income of $350,098.65 on operations, the loss is accounted for by the heavy interest charges of $305,549.99 on bonds, $42,481.20 interest on floating debt, $2,163.72 interest on deposits; discount on bonds (proportion), $3,716.40; taxes on non-operating properties, $4,177.02, and 2 per cent normal tax withheld on bond interest, $2,402.50, which totaled $360,490.93, or $10,392.27 in excess of the net profit on operations.

The 1919 report showed net profit on operations, $308,011.40, and a deficit of $35,304.68 for the year. The 1920 report shows improvement in conditions as far as the company is concerned.

Fixed assets as shown in the balance sheet submitted by Rufus R. Hand, as receiver, are given as $9,733,896, and total assets are given as $11,413,474.44, as compared to $8,000,000 valuation fixed for rate-making purposes by John F. McGee, special master in chancery. The present rate of $1.31 per 1,000 cu. ft. of gas is based on the $8,000,000 valuation and the cost of manufacturing gas as shown by the last three months' operation.

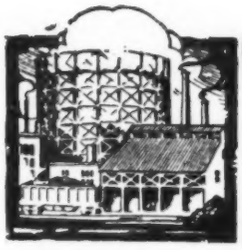
Loss Reported in Operation of Montgomery Light & Power for January

Montgomery, Ala.—Although the receiver for the Montgomery Light & Power Company operated in January under an increase in gas rates granted by the Public Service Commission, he has reported to the commission that the net deficit during the month from the gas and electric service was $17,477.20. Losses in the gas department were $3,451.20.

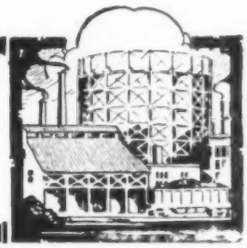
FALL RIVER (CONN.) GAS COMPANY reports for the month of Oct., 1920, the gross earnings were $89,766, an increase of $14,367, and the net earnings were $13,291, a decrease of $9,355. The surplus after charges was $13,221, a decrease of $9,142 For the twelve months ending Oct. 31 the gross earnings were $867,943, an increase of $115,167, and the net earnings were $159,372, a decrease of $4,358. The surplus after charges was $157,735, a decrease of $2,713.

Massachusetts Gas Company December Report

The combined net earnings available for dividends of the subsidiary companies of the Massachusetts Gas Companies for December were $311,427, a decrease of $42,646, or 12.04 per cent, compared with the corresponding month a year ago.



NEWS OF THE GAS INDUSTRY



New England Association Holds Enthusiastic Meeting

Full Membership in Attendance at Fifty-first Session Held in Boston, Feb. 16 and 17

It was an enthusiastic gathering that attended the annual meeting of the New England Association of Gas Engineers on Feb. 16 and 17, in Boston. It was almost a full 100 per cent attendance of the membership of the association and the keen interest displayed in the various papers and the discussions which followed showed that the gas men in that section of the country are thoroughly alert to the possibilities of the present year. It was the fifty-first annual meeting.

The program was a long and varied one covering problems that are coming to light every day. One of the most interesting features was the restoration to the program of a paper on gas lighting. This had been dropped for the past several years but the enthusiasm aroused showed that the subject is one that is very close to the minds of gas men. Practically the entire morning session of Feb. 16 was taken up with the paper by A. J. Smith, of Concord, N. H., on Gas Lighting and the discussion that followed. Mr. Smith's paper appears in another section of this issue.

The session opened with an address by W. F. Norton, the president and then followed the routine business which was quickly disposed of. Mr. Smith then read his paper.

Practically every one of the nearly two hundred men present took part in the discussion which followed and the consensus of opinion was that during this year the companies should make a drive to increase the gas lighting business and not only to hold the business that comes from this source.

One of the speeches which followed Mr. Smith's paper was made by William Gould, of Boston, who declared that he was going to say many unpleasant things. Mr. Gould did not stir up any antagonism but he did succeed in creating a new interest in this vital and important matter.

All of the sessions of the convention were equally interesting as was the banquet on the evening of Feb. 16 at which numerous speeches were made.

Many of the most prominent men of the industry were in attendance and took part in the meeting.

The full program and the papers to be read are as follows:

Feb. 16, 1921—morning session:

Meeting called to order by the president, 10 A. M. sharp.

Reading of minutes of last meeting.

Report of directors.

Election of new members.

Report and secretary and treasurer.

Reading list of deceased members.

Reading of correspondence.

Address of president.

Report of committees.

Election of officers.

General business.

Reading of Papers.

One o'clock—adjournment for luncheon.

Two thirty o'clock—reassembling.

Reading of papers and discussion until adjournment.

Thursday, Feb. 17, 1921:

Meeting called to order at 10 o'clock.

Reading and discussion of papers and questions from the question box and miscellaneous business.

Papers—"Gas Lighting," A. J. Smith, Concord, N. H.; "Principles of Gas Rate Making," F. C. Freeman, Providence, R. I.; "Gas Making from Cheap Oxygen," E. A. W. Jefferies, Worcester, Mass.; "Industrial Uses of Gas," Messrs. Joyce, Smith, Bercthold, Lafore, Boston, Mass.; "Report on Installation of Water Heaters," J. C. D. Clark, Boston, Mass.

The officers of the associaton for the year are:

President—W. F. Norton.

Vice-Presidents—Burton Smart, V. E. Bird.

Directors—R. E. Wyant, C. R. Prichard, H. N. Cheney, C. E. Page, W. B. Nichols.

Secretary and Treasurer—John L. Tudbury.

Committee of Arrangements—Burton Smart, V. E. Bird, J. L. Tudbury.

Gloucester Gas Light Company More Than Doubles Capacity

Gloucester, Mass. — Improvements of an extensive nature in the plant of the Gloucester Gas Light Company are under way and when completed will make it second to none for its size of any in New England. Installation of machinery is now going on. A new relief holder will be constructed and contracts call for the completion of all work by July 1, 1921.

The new machinery to be installed include a new eight-foot water set, new condenser, station meter, exhausted and turbine blower.

The water gas set will be furnished by the Gas Machinery Company of Cleveland, Ohio. The new relief holder will be built by the Stacey Brothers Gas Construction Company of Cincinnati, Ohio.

Superintendent of Portland Gas & Coke Gives Rules for Saving Gas

Portland, Ore.—The present increases in the cost of gas can be offset to a considerable extent by a scientific use of that fuel, was the declaration of E. L. Hall, general superintendent of the Portland Gas & Coke Company, in an address to the men employed in the service department of that concern following the announcement of the new gas rates.

The following rules for economizing gas were given by Mr. Hall:

Draft should be properly regulated.

Food should be ready to put into the oven before lighting the oven burners.

Baking temperature can be reached in from five to eight minutes after lighting the burners. When bread or pastry begins to brown reduce the gas consumption by one-half.

Turn gas off at least ten minutes before removing the baking, thereby saving 20 per cent of gas.

Five minutes is ample time to heat the broiler before using. A longer period only results in waste.

The gas range should never be used for house heating. The oven is constructed for the purpose of retaining and not radiating heat.

Regulate gas flames in range until the tip just touches the bottom of the vessel. When the flame curls around the sides of the vessel it indicates a waste.

Reduce flame when contents of vessel reach boiling point, or transfer to simmering burner. Do not use more than enough gas to keep the liquid at boiling point. More than this is waste and accomplishes nothing.

The big burners should not be used except for frying. Use the smallest burner that will do work.

Get acquainted with your simmering burner. It is surprising how much work it will do. The simmering burner uses only one-fourth of what the big burner uses and one-half of the ordinary burner.

Don't light the gas burner before you have the vessel ready to place on it. Don't let it burn while the vessel is removed. Matches are cheaper than gas, and a gas lighter cheaper than matches.

Cover your cooking vessels. An open vessel requires one-third more heat than a closed one.

If small quantities of hot water are needed use a covered teakettle.

Steam cookers or multiple cookers are recommended. They save gas.

Use a toaster over an ordinary burner instead of the oven. The ordinary burner uses only about one-fourth the gas that the oven uses.

Keep burners clean. Brush them up and wipe them with an oily rag. Don't use stove blackening on the burners. Clean around holes with a piece of wire; slots with a piece of tin. Remove the burners occasionally and boil them out in a strong solution of soda or lye.

Do not try to use an oven when the lining is worn out, nor burners that have become warped.

A long yellow smoky flame is wasteful. It needs more air to secure the proper combustion. A small blue flame is hotter, although it requires less gas.

Never turn the cock part way off at the gas meter. This does not save gas but interferes with good service.

Laclede Gas Light Company Annual Report

Laclede Gas Light Company of St. Louis, in its annual report for 1920, shows a balance after deducting preferred dividend requirements of $137,027, against $141,724 in the preceding year. The year's gross income increased almost a million dollars, amounting to $6,533,607, as compared with $5,531,710 in 1919. The net income last year was $2,611,732, against $2,184,828 in the previous year. Net earnings were $1,942,366, against $1,875,097, while balance before preferred dividends amounted to $262,027, compared with $266,724. Preferred dividend payments aggregated $125,000, leaving a surplus for the year of $137,027 against $141,724 the year before.

3,500,000 Cu. Ft. Additional Daily Capacity

In keeping with the expansion of its business the Atlantic City (N. J.) Gas Company is installing additional carbureted water gas equipment at its plant. The contract was awarded to the U. G. I. Contracting Company of Philadelphia, and the new set will give the plant 3,500,000 cu. ft. additional daily manufacturing capacity.

Has Plan to Insure Gas Bills Being O. K.

Atlanta, Ga.—Ray E. White, a member of the Decatur city commission, has devised a plan whereby he believes the users of gas in that suburban city can be assured of a correct reading of their meters. He has introduced an ordinance creating the position of municipal gas-meter reader, who shall read all meters monthly, submitting the user a bill, the Georgia Railway & Power Company a duplicate, and the city clerk a triplicate to be filed. The ordinance further provides that the Railroad Commission be formally petition to pass an order requiring the power company to recognize the services of the city meter reader in lieu of or in addition to the company's meter readers.

A. G. A. Engineering Service for Member Companies

The general service of the association has been augmented by the addition of A. I. Phillips, graduate of the Massachusetts Institute of Technology, an engineer of broad experience in the gas business.

With the industrial fuel service already established, the general engineering service has been instituted at the request of member companies that have been in need of assistance in operating problems and technical matters generally, as well as in the preparation of rate cases, revision of service standards, etc.

Mr. Phillips' services will be helpful in a consulting capacity and in the field of such matters as revision of service standards, plant operation, and efficiency.

Mr. Ehlers' services provide expert advice and assistance in making surveys, solving special problems of gas application, and promoting and soliciting the use of gas for industrial purposes.

The rates for the first five consecutive working days, or less, for this service will be $20 per day; next five consecutive working days thereafter $15 per day, plus traveling and living expenses of engineer in the field. Contracts to take the service for a total engagement of thirty working days or more during 1921, $15 per day.

It is requested that, if possible, applications be limited to ten working days in any one engagement.

Refuses a Rate Advance Temporarily

Richmond, Va.—The State Corporation Commission has refused the rate increase asked for by the Bristol Gas & Electric Company on both gas and electric current.

In an opinion by the commission, filed with the order, comment is made that the opponents of the increase have shown an apparent unwillingness to have the case heard on its merits before a body created by law for that purpose and equipped for that purpose. The commission also denied a motion made by the Bristol Chamber of Commerce through Secretary Hays, asking for a postponement in order to give the engineers employed by the chamber time to complete their report. It is indicated by the opinion that the commission does not consider the work of these engineers as of any importance in determination of the case.

The company, it finds, has been economically managed, and the commission concludes that unless costs of production are soon lessened, a rate increase in the near future will be necessary, or efficiency will be so lowered that the public cannot be properly served.

Cost of Making Gas Increases 300 Per Cent

According to statistics filed with the Railroad Commission, the cost of commodities used in making gas in Wisconsin has increased in the past eight years 300 per cent or more. The average commodity costs for a typical company in Wisconsin show the following increases:

	1912	1920
Labor, per hour	$0.12	$0.60
Coal, carbonized, ton	4.00	11.00
Gas oil, per gallon	0.038	0.13
Pipe, per ton	30.00	90.00
Fire brick, per M	28.00	62.00

While the cost of making gas has soared 300 per cent, the cost of its use to the consumer has not increased on the average more than 40 per cent, whereas the cost of other fuel has increased from 100 to 300 per cent. Figures submitted show anthracite coal selling at $8 to $9 a ton in 1912 and $17 to $19 in 1920; coke, $6 to $7 in 1912, $16 in 1920. Food articles, according to statistics of the U. S. Labor Bureau, increased 115 per cent to the consumer in the same period.

It will cost the gas companies more in freight charges on coal and oil this year than it cost them for the actual coal and oil delivered at their plants in 1915. If they could get their coal and oil for nothing this year, it would cost them more for freight alone than it cost them for their coal five years ago.

Night Lamps for Stores a Protection Against Burglary

Bridgeton, N. J.—The police department is now furnishing a patrolman to look after the store property in the downtown district and the merchants are generally responding to the request of the police to place a night lamp in their stores which gives opportunity to have a view of the interior. The Bridgeton Gas Light Company has a large number of orders for these lamps, several of which are already placed. The company has arranged wherever it is furnishing arc lamps for store lighting to install one of the night lamps without any expense and will maintain the lamp after it is placed. The man who looks after the arc lamps is to give attention to the night lamp at the same time. It is therefore possible for the merchants to have the night lamp without any cost excepting the charge for the small amount of gas which is used in the night. The lamps which are already in service have given excellent results, and the light really furnishes the best possible protection from burglary.

Bill to Permit Combination of Public Service Corporations in State of South Carolina

Charleston, S. C.—A bill to repeal the South Carolina law which prohibits the combination of public service corporations such as gas companies, electric and street railways, etc., has been favorably reported upon by the finance committee of the State Legislature, which is now in session, and recommended for a hearing. Under the law as it now stands these corporations are prohibited from effecting any sort of a combination, in spite of the fact that combinations of such a nature most frequently reflect to the welfare of the public and the community served by the corporation. If this measure becomes a law, the existing law will be repealed at the present session.

Gas Rates of Milwaukee Are Increased 20 Per Cent

Milwaukee, Wis.—Milwaukee gas rates applicable to homes and other small consumers will be advanced from 75 to 90 cents per 1,000 cu. ft. under an order handed down recently by the Wisconsin Railroad Commission. The advance will add approximately 20 per cent to the gas bills of thousands of city and suburban householders.

The commission also granted substantial increases in business rates, or those of large gas consumers. On the domestic or home rate the Milwaukee Gas Light Company asked for an increase of from 75 to 95 cents. The commission cut 5 cents from their demand on each of the various schedules.

After referring to the showing made by the Milwaukee Gas Light Company relative to increases in the cost of labor, coal and other materials, the commission, in ordering increased rates, stated in part:

"In the light of all these conditions we conclude that a schedule of rates averaging 5 cents per 1,000 cu. ft. less than that suggested by the company should be authorized. It appears to us an equitable distribution of the adjustment to make each step of the schedule 5 cents less than that suggested.

"The line of questioning pursued by the city at the hearing might be taken to indicate that the city authorities believe that as much as possible of the increase should be placed upon the industrial consumers and as little as possible upon domestic consumers. In connection with this, however, it must be considered that unquestionably the very small domestic user is served at less than the full cost which would fairly be apportioned to him, and also we must bear in mind that industrial conditions at the present time are quite different from what they were a few months ago.

"Furthermore, the increase is larger for domestic consumers than for the small users, and the difference between the rates for large and small users will be less than under the previous schedule. We believe that a schedule 5 cents per 1,000 cu. ft. lower in each step than that suggested by the company is evidently fair to the small consumer, and we do not believe that it places more of the burden on the large consumer than he may reasonably be asked to carry. We find that an increase in the schedule of rates is reasonable and just."

New Plant for Atmospheric Nitrogen Co. at Syracuse

The U. G. I. Contracting Company's field force is now engaged in comprehensive erection work for the Atmospheric Nitrogen Company at Syracuse, N. Y. The installation includes two sets of blue water gas apparatus, each having a capacity of 2,500,000 cu. ft. per day, waste heat boiler, condenser-Scrubber, fuel conveying and weighing system and other apparatus, as well as the necessary building for housing the apparatus and equipment.

The blue gas sets will be equipped with automatic controls, carborundum linings, air and steam controls, etc.

Iroquois Gas Co. Withdraws Rate Petition

Buffalo, N. Y.—The Iroquois Gas Company has withdrawn its application for increased rates filed with the Public Service Commission.

The company in its original application asked for 65 cents a thousand cubic feet for the gas, with a 5-cent discount, making a net rate of 60 cents a thousand cubic feet. This rate was contested by the city at numerous hearings before Commissioner Hill of the Public Service Commission and his decision had not been announced.

Following the decision of the appellate division that the valuation of the property of the company was unsatisfactory and overhigh, this action was taken.

In the place of the application with drawn will be filed another, the notice to the corporation counsel announced. It will be based on a sliding scale, using the present rate as a base and increasing the price per thousand cubic feet as the amount used increases.

This plan, the company contends, will aid in the conservation of gas, the more used the more the proportionate cost.

City Appeals Gas Decision

Montgomery, Ala.—Notice of appeal to the circuit court from the decision of the Public Service Commission giving the receiver of the Montgomery Light & Water Power Company the right to charge $2.10 a thousand feet for gas, has been filed with the commission by the city commission of Montgomery, marking the first instance in the history of the commission where any interest other than a transportation company has gone into court in an effort to obtain a reversal of the commission's decision.

Members of the Montgomery commission filed with the Public Service Commission a bond which will cover all costs in the event the city loses in the courts. The case will be tried before a judge without a jury. Ludlow Elmore, city attorney, announced that the city will appeal from the order of Judge Henry D. Clayton, of the Federal court giving the receiver the right to charge $2.25 a thousand feet.

Will Make Gas Fixtures

The United Gas & Electrical Engineering Company, 700 West Baltimore Street, Baltimore, Md., has been incorporated with a capital of $100,000 by Jesse S. Fine, S. Berkowich and Philip Raun, to manufacture electrical and gas fixtures and other electrical equipment.

Public Attitude Considered in Rate Increases

H. H. Corey, of the Oregon Public Service Commission, says the public has failed to realize that public utility companies have not received a fair return during the past four years, and that even though commissions were compelled to consider the natural antipathy of the public to increased rates, they had found it necessary to allow increases.

"In every instance," said Mr. Corey, in speaking of the Oregon situation, "the increases granted by the commission have been necessary. There has been no profiteering by utilities. On the contrary, by far the greater part of the vast investments in our public utilities has not received a fair return on the actual or fair value of the property used and useful in the service of the public during the past four years.

"The utilities are so tied into the business of the States and so interwoven with the growth, prosperity and advancement of the community that the greatest development and advancement is found in those States where commissions have acquired reputations for 'square shooting.'"

Light Company Men Organize Lease Concern

Pine Bluff, Ark.—Twenty-five of the local officials and employees of the Arkansas Light & Power Company and the Pine Bluff Company have organized the Interstate Land & Lease Company for the purpose of dealing in oil and gas leases in Arkansas and Louisiana. The officers of the company are: W. E. Baker, president; E. A. Garlock, vice-president; P. C. Tucker, vice-president; O. C. Eiland, secretary-treasurer. The directors are W. E. Baker, F. M. Wilkes, L. B. West, L. R. Myers and W. F. McKnight.

Membership in the company was limited to 25, and none of the shares will be offered outside the original membership, Mr. Baker stated. "We propose to restrict ourselves entirely to handling leases and will not undertake to drill any wells. It is possible we may retain royalty interest in some of the leases we dispose of, but the bulk of our business will be the buying and selling of leases in oil and gas fields."

The company proposes to deal in leases in the El Dorado, Russellville, Malvern and Newport fields. For some of its holdings in the El Dorado field it has already refused offers that would net a good profit. J. R. Woolum, one of the shareholders, has holdings in the Russellville territory for which he has declined offers that would give him a good profit. He believes that the Russellville field will be the next in Arkansas to "come in" as proven territory.

The company will have a branch office in Chicago. This will be in charge of Mr. Garlock, one of the vice-presidents, who is a certified public accountant with offices in Chicago and New York.

City to Install Huge Gas Meter

Hamilton, Ohio.—A huge gas meter, fitted to measure all gas used in the city has been declared an emergency and has been ordered for $4,000 by the council. Recent contracts with the Ohio Fuel Supply Company for gas make the meter necessary, the service department declared. The meter will be used to determine the amount of gas obtained from the fuel supply firm.